

DIRECTOR'S LETTER OF INSTRUCTIONDLI-LD-I
Page 1 of 9**LAND DEVELOPMENT**

SUBJECT: STORMWATER MANAGEMENT AND REQUIREMENTS ON
DEVELOPER AND SINGLE FAMILY GRADING PERMITS -
CONSTRUCTION BMPs

PURPOSE:

To provide guidelines for addressing stormwater management on developer and single-family grading permits and other construction activities with potential to pollute stormwater. These guidelines apply to all types of soil disturbance projects that are regulated by the County Grading ordinance or County Stormwater ordinance. In addition to these measures, projects that are over 5 acres in disturbed area (and those that are less than five acres soil disturbances, but are part of a larger common plan of development) may have responsibilities directly to the State Regional Water Quality Control Board.

BACKGROUND:

The National Pollutant Discharge Elimination System (NPDES) is the portion of the Federal Clean Water Act that applies to protection of receiving waters. As regulatory agency, the San Diego Regional Water Quality Control Board (RWQCB), permits and enforces conditions for activities shown on County Grading Plans. Grading activities must also comply with San Diego County Municipal Stormwater Permit requirements, including those for material and waste control, erosion control, and sediment control on construction sites.

Construction-related materials, wastes, spills, and residues must be retained on site to eliminate any increase in transport from the site to streets, drainage, receiving waters, and adjacent properties by wind or runoff due to development. To ensure no pollutant discharge occurs, County permittees must implement Best Management Practices (BMPs) to the maximum extent practicable.

SCOPE:

This letter applies to all Land Development and Engineering Services Division staff at the Department of Public Works.

INSTRUCTIONS:

Land Development staff shall review all permit applications and apply conditions related to grading, erosion control, stormwater best management practices, and discharges from the site appropriate to the type of activities proposed. These conditions shall be consistent with applicable County grading, stormwater, land clearing, and leach field ordinances. These conditions shall also be consistent with the County of San Diego Stormwater Management Program Best Management Practices Manual (or other guidance prepared for use on land development projects by the County of San Diego Department of Environmental Health, provided such other guidance is approved for this use in lieu of the County manual by the Director, DPW). County permits for sites subject to a state-issued NPDES General Permit for Construction Activities shall include a condition requiring compliance with that NPDES permit.

Minimum performance standards to control pollution from any operations falling under a County permit are:

- ◆ Installation and maintenance of BMPs to prevent all construction pollutants from contacting storm water and with the intent of keeping all products of erosion from moving off site into receiving waters.
- ◆ No discharges of pollutants (including sediment) from the site (only clear water discharge will be allowed).

Every permittee is responsible and required to meet these performance standards and to certify selected BMPs will be installed, monitored, maintained or revised as appropriate to ensure effectiveness. BMPs must be installed in accordance with industry recommended standards (Caltrans or California Stormwater BMP handbooks, etc.).

At a minimum, the County requires that the BMPs listed below are installed and maintained for all grading projects. Depending on project scope and potential associated discharges, additional BMPs may be needed. It is the property owner's responsibility to implement a plan to address all potential non-stormwater discharges. If the project proponent desires to use a BMP not listed herein, approval from the County is required before installation.

PROCEDURE:

Erosion Control

The Property Owner must implement the following minimum Physical Stabilization BMPs or Vegetation Stabilization BMPs, or both, to prevent erosion from exposed slopes. All slopes and disturbed flat areas must be stabilized and protected, including areas disturbed by clearing operations. *[The County will not accept: tracking, mulch, wood chips, hydroseeding without watering, jute matting or jute netting as a means to protect exposed slopes from erosion, but such measures may be used to protect disturbed soil areas that are flat and level (less than 5% slope).]*

1. Physical Stabilization through use of geotextiles, mats, fiber rolls (SS-7 or ESC20), Bonded Fiber Matrix or other material approved by the County for stabilizing slopes, or
2. Vegetation Stabilization using hydroseed (SS-4 or ESC10) or acceptable landscaping may be used only May 1 to August 15. Vegetation proposed to stabilize slopes must be installed by August 15, watered, and established prior to October 1. The property owner shall show on the plan a contingency physical BMP to be installed by October 1 if hydroseed establishment does not occur by that date. If landscaping is proposed, erosion control measures must also be used while landscaping is being established. Established vegetation shall have a subsurface mat of intertwined mature roots with a uniform vegetative coverage of 70 percent of the natural vegetative coverage or more on all disturbed areas.
3. All manufactured slopes and cleared slopes of 3 to 1 (horizontal to vertical) and steeper are to be protected with a BMP approved by the County of San Diego, as described in number 1 and 2 above. Cleared slopes flatter than 3 to 1 must still be protected from erosion using either an approved BMP or by using hydromulch with a Guar binder. Flat areas of less than 5% (like building pads, parking areas, leach fields) shall have 100% protection using geotextiles, mats (SS-7 or ESC20), or other material approved by the County for stabilizing slopes, or using tracking and soil stabilizers/binders (SS-5), temporary seeding (SS-4), mulch/wood chips (SS-3, SS-6, SS-8), or jute matting (SS-7). The County may reduce this requirement for flat areas and the below requirement, provided full sediment control is provided through constructed and maintained desiltation basins (SC-2) at all project discharge points.
4. Areas of graded pads that have active structure construction underway may be protected by rolled plastic as part of a weather-triggered action plan until the structure's roof has been completed. The remainder of the pad area must continue to be protected using erosion control measures identified above.
5. Unpaved roads are exempt from the 100% protection requirement but shall have appropriate BMPs installed such as gravel bag chevrons.

Sediment Control

1. Protection of the grading site perimeter, all environmentally sensitive areas and all watercourses and at all operational internal inlets to the storm drain system at all times; through use of filtration devices, silt fencing (SC-1), straw fiber-rolls, gravel bag barriers (SC-8 or ESC52), and gravel inlet filters; and
2. Capture of sediment and dust through the use of storm-drain inlet protection (SC-10 or ESC54) and construction road stabilization (TC-2 or ESC23).

Offsite Sediment Control

Elimination of off-site sediment tracking through use of stabilized construction entrances/exits (TC-1 or ESC24).

Velocity Reduction

Velocity reduction of all runoff leaving the site, and onsite runoff that could cause erosion, through appropriate outlet protection (SS-10 or ESC40). Velocity reduction BMPs shall be designed and constructed for the precipitation intensity from the 10-year, 6-hour rain event. Runoff shall be calculated using $Q=C \times I \times A$ where Q is the discharge rate measured in cubic feet per second; C is the runoff coefficient; I is the precipitation intensity for the 10-year, 6-hour rain event; and A is the area draining into the sediment basin in acres.

Materials Management

Waste handling and materials storage areas shall be designated with identification of waste handling methods. Methods for handling; Solid waste (WM-5 or CA20), Sanitary waste (WM-9 or CA24), Concrete waste (WM-8 or CA23), Hazardous waste (WM-6 or CA21) shall be shown. Material storage methods proposed (WM-1 or CA10), including storage of emergency BMP materials, shall be shown.

Structural BMP Sizing

If a project chooses to rely on desiltation basins for treatment purposes, at a minimum all desiltation basins shall be designed by a registered civil engineer and be sized to either:

- Ø Have at least a capacity equivalent to 3,600 cubic feet of storage per acre drained, or
- Ø Be designed using the standard equation: $As=1.2Q/Vs$.
 - As is the minimum surface area for trapping soil particles of a certain size;
 - Vs is the settling velocity of the design particle size chosen;
 - $Q=C \times I \times A$ where Q is the discharge rate measured in cubic feet per second;
 - C is the runoff coefficient;
 - I is the precipitation intensity for the 10-year, 6-hour rain event and
 - A is the area draining into the sediment basin in acres. The design particle size shall be the smallest soil grain size determined by wet sieve analysis, or the fine silt sized (0.01mm) particle, and the Vs used shall be 100 percent of the calculated settling velocity.

The length of any basin, as measured from inlet to outlet, shall be more than twice the width whenever practical; the depth must not be less than three feet nor greater than five feet for safety reasons and maximum efficiency. The basin(s) shall be located on the site where it can be maintained on a year-round basis, have a means for dewatering within seven calendar days following a storm event. Basins should be fenced if safety (worker or public) is a concern, and shall be maintained at least once before the start of the rainy season (October 1) and as needed to retain a minimum of two feet of capacity at all times.

Plan Notes

The following notes shall be shown on erosion control plans or the erosion control portion of grading plans. Plans shall include details and drawings of the erosion control methods.

1. "During the rainy season the amount of exposed soil allowed at one time shall not exceed that which can be adequately protected by the property owner in the event of a rainstorm. A weather-triggered BMP action plan and 125% of all supplies needed to implement the plan shall be retained on the job site in a manner that allows full deployment and complete installation in 48 hours." All other BMPs shall be deployed on an on-going basis.
2. "The active disturbed area shall not exceed 50 acres at any given time without demonstrating to the County DPW Director's satisfaction that adequate erosion and sediment control can be maintained. Any disturbed area that is not actively graded for 10 days must be fully protected from erosion. Until adequate long-term protections are installed, all disturbed area shall be included when calculating the active disturbed area. All erosion control measures shall remain installed and maintained during any inactive period."
3. "The property owner is obligated to insure compliance with all applicable stormwater regulations at all times. The BMPs that have been incorporated into this plan shall be implemented and maintained to effectively prevent the potentially negative impacts of this project's construction activities on stormwater quality. The maintenance of the BMPs is the permittee's responsibility, and failure to properly install or maintain the BMPs may result in enforcement action by the County of San Diego or others. If installed BMP's fail, they must be repaired or replaced with an acceptable alternate as soon as safe to do so."
4. *On projects of greater than five acres add the following note* "A Notice of Intent (NOI) has been, or will be filed with the State Water Resources Control Board (SWRCB) and a Stormwater Pollution Prevention Plan (SWPPP) has been or will be prepared in accordance with the requirements of California General Permit for Stormwater Discharges Associated with Construction Activity (Permit No. CAS000002) for all operations associated with these plans. The NOI number assigned by SWRCB for this project is_[WDID #]. [alternative: "not yet assigned, but will be provided before a permit is issued."] The permittee shall keep a copy of the SWPPP on site and available for review by County."

Grading Permit Issuance

In addition to the details and drawings of the required BMPs listed above, the following stormwater related forms shall be completed and signed by the property owner prior to permit issuance:

1. Stormwater Management Plan (certification form)
2. BMP Tables

Grading Inspection for Best Management Practices

Construction Engineering staff in addition to all normal inspections for grading operations will perform the following inspection tasks:

Initial BMP Inspection

This inspection shall occur after the area to be graded is brushed or cleared, but prior to the start of grading operations. The following stormwater items are required to pass this inspection:

1. Perimeter Sediment Control BMPs and Offsite Sediment Control BMPs shall be installed as per the approved grading plan.
2. For weather-triggered BMP action plans, 125% of all needed BMP materials shall be stored onsite to allow full deployment and installation within 48 hours or less.
3. Required fencing installed along or around any environmentally sensitive areas.

Ongoing and Rough Grade Inspections

The following stormwater items are required to pass inspections:

1. All items from the initial BMP inspection shall be in place.
2. Erosion Control BMPs shall be installed as soon as the finished slopes and flat areas are complete, or when slopes and flat areas have not been actively graded for 10 workdays. From May 1st to August 15th vegetation stabilization (only) may be installed. If vegetation stabilization is used, a slope irrigation system shall be in place and operable. From August 15th to May 1st, if the vegetation is not established, additional physical or hydraulic erosion control BMPs are also required.
3. Flat area protection may be waived if site discharges through a desiltation basin(s).
4. No rills or gullies larger than 3" wide or deep shall be allowed, and must be repaired as soon as it is safe to do so.
5. All BMPs shall be maintained in proper working condition.
6. The SWPPP or Site Erosion Control Plan shall reflect current site conditions and deployment of BMPs.
7. No pollutant discharges into stormwater conveyances or receiving waters

Final Grade Inspection

The following stormwater items are required to pass this inspection:

1. All BMPs shall be in place and in proper working condition.
2. No rills or gullies larger than 3" wide or deep shall be present.
3. Vegetation shall be established on all manufactured slopes greater than 3 feet in height and slopes less than 3 feet must be protected through either vegetation or other approved erosion control BMP. Special cases where lack of vegetation

establishment is the sole reason occupancy is being withheld are to be presented to the DPW Manager responsible for inspection activities.

4. Flat areas shall be protected by either vegetation or other approved BMP unless site discharges through a desiltation basin(s).
5. No pollutant discharges into stormwater conveyances or receiving waters

Inspection Frequencies and Responsibilities

1. County inspectors shall conduct at least monthly inspections of all active Construction Projects during the rainy season (October 1 to April 30). If a construction project has been designated as “high priority” site (below) or if discharges have occurred, the County shall increase inspections to weekly.
2. Supervised grading projects (per Grading Ordinance) shall have additional inspections by the private civil engineer supervising the grading. In addition to general supervision and coordination all field surveys and setting of grade stakes in conformance with the plans, sufficient site inspections will be made during grading operations to allow the civil engineer to file reports with the County as follows:

- Ø Weekly during all times when grading operations are active on the site;
- Ø Monthly at all other times, and at any time when requested in writing to do so by the County.

Reports shall include information concerning project BMPs and discharges. County inspection staff shall review all such reports as soon as they are received to identify any issues of non-compliance. County inspectors shall conduct at least monthly inspections to confirm that the reports reflect current site conditions.

3. The County will increase the frequency of site inspections on “High Priority” projects as they are identified. At a minimum high priority construction sites shall include sites of 50 acres or more where grading will occur during the wet season, and sites of 5 acres or more that are tributary to a Clean Water Act section 303(d) water body impaired for sediment, coastal lagoon, or other receiving water within an environmentally sensitive area. Currently, no County construction sites drain directly into a 303(d) listed water body. The following criteria will be used by staff in identifying additional projects as “High Priority”: (1) soil erosion potential; (2) site slope; (3) project size and type; (4) sensitivity of receiving water bodies; (5) proximity to receiving water bodies; (6) non-storm water discharges; and (7) any other relevant factors.
4. If a County inspector observes non-compliance at a project, they shall take immediate action. Cases of minor deficiencies in BMP installation or operation should be documented with a Notice to Comply (NTC) or an Administrative Citation Warning along with a reasonable compliance date as determined by the inspector.

Serious BMP deficiencies, discharges and failure to correct minor BMP deficiencies should be documented with a Notice of Violation (NOV) or an Administrative Citation. The inspector is encouraged to contact his or her supervisor by telephone if there are questions as to whether to issue a NTC, NOV, or Administration Citation. The inspector shall notify their supervisor immediately of any documented discharges or serious erosion problems. Copies of the NTC, NOV or Administrative Citation should be left with the person in charge of the site. The inspector shall complete a written inspection report within 2 working days of the incidence of non-compliance, and shall include evidence such as notes, photographs, and log sheets for use in any enforcement action. The inspector shall conduct follow-up inspections to ensure that the deviations are either corrected or additional compliance actions are taken.

The inspector's supervisor will review all NOVs and Administrative Citations and determine if further actions are warranted including issuance of a Notice to Stop Work. The supervisor shall contact the Department of Environmental Health (DEH) for any documented discharges or serious erosion problems. DEH will make the determination to inform the RWQCB (as warranted) of such violations.

5. If the inspected site is not meeting minimum water quality protection requirements, County inspectors must immediately direct compliance as noted above and conduct a follow-up inspection to confirm that compliance is attained. Additional inspection will be conducted as project scope dictates the need for modified and/or additional BMPs.


ADVISORY

Owners of property where soil-disturbing activities occur have other responsibilities to the State Water Resources Control Board in addition to those identified in this DLI. Examples of these include, but are not limited to:

- Ø Submittal of a Notice Of Intent (NOI) to the State, preparation of a Storm Water Pollution Prevention Plan (SWPPP), continuing updating of the SWPPP to keep it functional and current, and preparation of an annual compliance certification on sites where the area to be disturbed under a common plan of development exceeds 5 acres.
- Ø Responsibility for pre-storm, post-storm, and storm event BMP inspections by qualified person(s) to ensure full compliance with the state permit and implementation of all elements of the SWPPP
- Ø Sampling and analysis program (under specific conditions) for sedimentation, siltation, turbidity, or pollutants not visually detectable, which could cause or contribute to an exceedance of water quality objectives in the receiving water.
- Ø Additional record keeping, pollutant identification, reporting, and maintenance/repair responsibilities.

REFERENCE:

- 1) Grading Ordinance - Sections 87.101 through 87.717 of San Diego County Code of Regulatory Ordinances On the Web at http://www.amlegal.com/sandiego_county_ca/
- 2) Stormwater Ordinance - Sections 67.801 through 67.811 of San Diego County Code of Regulatory Ordinances On the Web at http://www.amlegal.com/sandiego_county_ca/
- 3) Stormwater Permit # CAS000002 and State Water Resources Control Board Order 99-08 On the Web at: <http://www.swrcb.ca.gov/rwqcb9/>
- 4) Caltrans Storm Water Quality Handbook (BMP) dated April, 1997
On the Web: <http://www.dot.ca.gov/hq/oppd/stormwtr/>
- 5) California Storm Water BMP Handbook for Construction dated March, 1993
- 6) DLI-LD-H, Procedures for Stormwater Regulations Compliance



APPROVED BY: JOHN L. SNYDER, Director

SUNSET:

EFFECTIVE DATE: October 18, 2000
REVISION DATE: August 20, 2001
SUNSET DATE: August 20, 2006